	Patent an	d Trademark Office: U.S. DEPARTMENT OF COMMERCE			
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collect	ction of information unless it contains a valid OMB	control number			
Substitute for form 1449A/PTO	Complete if Known				
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)	Application Number	09/661,773			
(use as many sheets as necessary)	Filing Date	September 14, 2001			
(First Named Inventor	Simon F. Williams			
\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Group Art Unit	1614 1615			
The Treatment of the Party of t	Examiner Name	(ite Da			
Sheet 1 of 4	Attorney Docket Number	TEPH 102			

				U.S. PATENT DOCU	MENTS	
Examiner Initials*	Cite No. ¹	US Patent Document		Name of Patentee or Applicant of Cited Document	Date of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
			nd Code ² (if known)			
67		4,664,655		Orentreich et al.	05-12-1987	
		4,758,234		Orentreich et al.	07-19-1988	
	/ 4,938,763			Dunn et al.	07-03-1990	
/ 5,204,382			Wallace et al.	04-20-1993		
	5,278,201			Dunn et al.	01-11-1994	<u></u>
T^{-1}		5,278,202		Dunn et al.	01-11-1994	
		5,489,470		Noda	02-06-1996	
		5,502,116		Noda	03-26-1996	
		5,563,239		Hubbs, et al.	10-08-1996	
		5,709,854		Griffiths-Cima et al.	01-20-1998	
$dl\alpha$		5,728,752		Scopelianos et al.	03-17-1998	
		5,824,333		Scopelianos et al.	10-20-1998	
		<u> </u>				
		 		. :		
		1	1	Ι ,	1	

Examiner Initials*	Cite No. ¹				Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM- DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant	Te
- A		Office.3	Number*	Kind Code ⁵ (if known)			Figures Appear	
185		wo	94/02184	A1	Medinvent	02-03-1994		\vdash
7 1 1		wo	96/21427	A1	Atrix Laboratories, Inc.	07-18-1996		t-
		wo	96/40304	A1	Reprogenesis, Inc.	12-19-1996		
		wo	99/11196	A1	Point Blomedical Corporation	03-11-1999		<u> </u>
		wo	99/32536	A1	Metabolix, Inc.	07-01-1999	· · · · · · · · · · · · · · · · · · ·	
		wo	98/51812	A2	Metabolix, Inc.	11-19-1998		
/ // /		EP	0 432 443	A1/	Boehringer Ingelheim	06-19-1991		_

*EXAMINER: Initial If reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to application.

Date Considered

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SENT TO: Assistant Commission for Patent, Washington, DC 20231.

Signature

¹ Unique citation designation number ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant to place a check mark here if English language Translation is attached.

Sheet

PTO/S8/08A (10-98 Approved for use through 10/31/99, OMB 0651-0031 Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE Under the Paperwork Reduction Act of 1995, no persons are req matton unless it contains a valid OMB control number Substitute for form 1449A/PTO Complete if Known **Application Number** 09/661,773 INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary) . Filing Date September 14, 2001 First Named Inventor Simon F. Williams Group Art Unit

Attorney Docket Number

Examiner Name

		OTHER ART - NON PATENT LITERATURE DOCUMENTS								
Examiner's Cite Initials' No.										
		AGOSTINI, et al., "Synthesis and Charactertzation of Poly-ß-Hydroxybutyrate. I. Synthesis of Crystalline DL Poly-ß-Hydroxybutyrate from DL- ß-Butyrolactone," <i>Polym. Sci.</i> Part A-1, 9:2775-2787 (1971).								
	1	BYROM, "Miscellaneous Biomaterials," in <u>Biomaterials</u> (D. Byrom, ed.) pp. 333-359 (MacMillan Publishers, London 1991).								
		DE KONING et al., <i>Polymer</i> 35:2090-97 (1994);								
		DE SMET, et al., "Characterization of intracellular inclusions formed by Pseudomonas oleovorans during growth on octane," J. Bacteriol. 154:870-78 (1983).								
.		DUBOIS, et al., "Macromolecular Engineering of Polylactones and Polylactides. 12. Study of the Depolymerization Reactions of Poly (ε-caprolactone) with Functional Aluminum Alkoxide End Groups," Macromolecules 26:4407-12 (1993).								
		GAGNON, et al., <i>Polymer</i> 35:4358-67 (1994).								
		GAGNON, et al., <i>Polymer</i> 35:4368-75 (1994).								
		GROSS, et al., "Polymerization if β-monosubstituted-b-propiolactones using trialkylaminimum-water catalytic systems and polymer characterization," <i>Macromolecules</i> 21:2657-2668 (1988).								
		HOCKING & MARCHESSAULT, "Syndiotactic poly[(R,S)-B-hydroxybutyrate] isolated from methyaluminoxane-catalyzed polymerization," <i>Polym. Bull.</i> 30:163-170 (1993).								
T'H	,	HOCKING & MARCHESSAULT, "Biopolyesters" Griffin, Ed., "Chemistry and Technology of Biodegradable Polymers," pp. 48-96 (Chapman and Hall, London, 1994).								

Examiner's Date Considered Signature *EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered.

¹ Unique citation designation number ² See attached Kinds of U.S. Patent Occuments. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁶ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you require to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Include copy of this form with next communication to applicant,

PTO/SB/08A (10-98
Approved for use through 10/31/99. OMB 0851-0031
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Pa	perwork Reduction	Act of 1995, no pe	ersons and gequired to respond to	Acollection of information unless it contains a v	glid OMB control number				
	Substitute for f	orm 1449A/P	TO THOUSAND						
	STATE	MENT B	DISCLOSURE Y APPLICANT ts as necessary)	Application Number	09/661,773				
			•	Filing Date	September 14, 2001				
				First Named Inventor	Simon F. Williams				
		•		Group Art Unit	1614 6 13				
			_	Examiner Name	(itroure)				
Sheet	3	of	4	Attorney Docket Number	TEPH 102				

		OTHER ART - NON PATENT LITERATURE DOCUMENTS	
Examiner's Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	Ť²
A	7	HOLMES, "Biologically Produced (R)-3-hydroxyalkanoate Polymers and Copolymers," in Bassett Ed., "Developments in Crystalline Polymers," pp. 1-65 (Elsevier, London, Vol. 2, , 1988).	
		HORI, et al., "Ring-Opening Copolymerization of Optically Active ß-Butyrolactone with Several Lactones Catalyzed by Distannoxane Complexes: Synthesis of New Biodegradable Polyesters," Macromolecules 26:4388-4390 (1993).	
		HORI, et al., "Ring-Opening Polymerization of Optically Active ß-Butyrolactone Using Distannoxane Catalysts: Synthesis of High Molecular Wright Poly(3-hydroxybutyrate)," Macromolecules 26:5533-5534 (1993).	
		KEMNITZER, et al., "Preparation of predominantly Syndiotactic Poly(& -hydroxybutyrate) by the Tributylin Methoxide Catalyzed Ring-Opening Polymerization of racemic &-Butyrolactone," <i>Macromolecules</i> 26:1221-1229 (1993).	
		KOOSHA, "Preparation and characterization of biodegradable polymeric drug carriers," Ph.D. Dissertation, 1989, Univ. Nottingham, UK., Diss. Abstr. Int. 8 51:1206 (1990).	
	٠.	LAFFERTY et al., "Microbial Production of Poly-β-hydroxybutyric acid," Rehm and Reed, Eds., "Biotechnology" Verlagsgesellschaft, Weinheim, Vol. 66, 1988, pp. 135-176.	
		LE BORGNE & SPASSKY, "Sterecelective polymerization of ß-butyrolactone," Polymer 30:2312-2319 (1989).	
		LEMOIGNE and ROUKHELMAN, "Fermetation &-Hydroxybutyrique Caracterisation et Evolution Des Produits de Deshydration et de Polymerisation de L'acide &-Dehydroxybutyrique," Annales des fermentations, 5:527-36 (1925).	•
	_	MADISON & HUISMAN, "Metabolic engineering of poly(3-hydroxyalkanoates): from DNA to plastic," <i>Microbiol. Mol. Biol.</i> Rev. 63:21-53 (1999).	
		MULLER & SEEBACH, "Poly(hydroxyalkanoates): A Fifth Class of Physiologically Important Organic Biopolymers," Angew. Chem. Int. Ed. Engl. 32:477-502 (1993).	
~~~			

Examiner's Date Considered Signature

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 18 if possible. ⁶ Applicant to place a check mark here if English language Translation is attached.

Burden Hour Statement. This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you require to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

ATL1 #393824 v1

Please typ	o a pius s	ign (+) insi	de this box 🗕

6	P	E	40	3
('	DC1	1.8	2005	S TOTAL

PTO/SB/08A (10-96

Under the P				o a college of information unless it contains a	Approved for use bridge 1031/99. OMB 0651-0031 Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE raild OMB control number
	Substitute for	form 1449	APTO		Complete if Known
	STATE	MENT	N DISCLOSURE BY APPLICANT heets as necessary)	Application Number	09/661,773
	•	•	•	Filing Date	September 14, 2001
				First Named Inventor	Simon F. Williams
			•	Group Art Unit	18141 GB
				Examiner Name	CHIOUNE
Shoot	Α	of	1	Attornov Docket Number	TEDU 105 VI

		OTHER ART - NON PATENT LITERATURE DOCUMENTS	
Examiner's Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	Tz
战		POUTIN &AKHTAR, *Biosynthetic polyhydroxyalkanoates and their potential in drug delivery,* Advanced Drug Delivery Reviews 18:133-162 (1996).	
		STEINBÜCHEL, et al., "A Pseudomonas strain accumulating polyesters of 3-hydroxybutyric acid and medium-chain-length 3-hydroxyalkanoic acids," Appl. Microbiol. Biotechnol. 37:691-97 (1992).	
- /	-	STEINBÜCHEL, "Polyhydroxyalkanoic Acids," in Byrom Ed., "Biomaterials" MacMillan Publishers, London, 1991, pp. 123- 213.	
		TANAHASHI & DOI, "Thermal Properties and Stereoregularity of Poly(3-hydroxybutyrate) Prepared from optically Active ß-Butyrolactone with a Zinc-Based Catalyst," <i>Macromolecules</i> 24:5732-5733 (1991).	
		WALLEN and ROHWEDDER, "Poly-6-hydroxyalakaonate from Activated Sludge," Environ. Sci. Technol. 8:576-79 (1974).	
		WILLIAMS & PEOPLES, "Biodegradable plastics from plants," CHEMTECH 26:38-44 (1996).	
		WILLIAMS & PEOPLES, "Making Plastics Green," Chem. Br. 33:29-32 (1997).	
		WILLIAMS, et. al., "PHA applications: addressing the price performance issue I. Tissue engineering," Int. J. Biol. Macromol. 25:111-121 (1999).	
		XIE, et al., "Ring-opening Polymerization of ß -butyrolactone by Thermophilic Lipases," <i>Macromolecules</i> 30:6997-6998 (1997).	

Date Considered Signature *EXAMINER: Initial if reference considered, whether or not offstion is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you require to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Examiner's

¹ Unique citation designation number ² See attached Kinds of U.S./ Patent Documents. ² Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁵ Applicant to place a check mark here if English language Translation is attached.

1		
٠	þ	

		inside this box →		red to respond to a collection					Peter	PTO/SBOBA (108: Approved for use through 10/31/99, OLGI 0351-031 and Trademark Office: U.S. DEPARTMENT OF COMMERCE
	Substi	tute for form 14	49A/PTC	nac p respond to a conection (OF ENGINEERIN UNION	s it contains a vaid CIMB	CONTO		nplete	if Known
		STATEM	ENT E	I DISCLOSU BY APPLICA eets as necessary)	ANT	Application N	lum!	ber		09/661,773
	•	•		,,,		Filing Date				September 14, 2000
						First Named	Inve	ntor		Simon F. Williams
						Group Art Un				1615
			<i>.</i>			Examiner Na				Carlos A. Azpuru
Sheet		1 of		1		Attorney Doc	ket i	Number		TEPH 102
Examiner Initials*	Cite No.	US Patent Do	cument	Name of F	atentee or A	ENT DOCUMEN		Date of Cited	P	ages, Columns, Lines, Where Relevant
unidats.	NO.	Number K	ind Code ² (if known)	·	ited Documer	nt ·	M	Document IM-DD-YYYY		Passages or Relevant Figures Appear
							┝		├──	
										
								-		
										_
<u> </u>	 									
 							L	······································		
	-	 					├			
							┝		 	
								•		
		 								
 		 	+				ļ			
		 					├			
			上				<u> </u>			
L	L									
		•			OPEIGN DA	TENT DOCUM				
Examiner	Cite	Forei	on Patent	Document F		of Patentee or	ICMI	Date of Publicat	ion od	Pages Columns Lines 140
Initials*	No.1					of Cited Docume	nt	Cited Documen	t MM-	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear

					FOREIGN PATENT DOCUMEN	ITS .		
Examiner Initiats*	Cita No.1	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM- DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	F
		Office.	Number	Kind Code ⁵ (if known)	<u> </u>		· · · · · · · · · · · · · · · · · · ·	
ax		PCT	WO 00/51662		Tepha, Inc.	09-08-2000		
- COU		PCT	WO 00/56376		Metabolix, Inc.	09-28-2000		
		 						lacksquare
								上
								╁
		 						二
		/		/		+		┼

*EXAMINER: Initial if reference considered, whetherer not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to application.

Date Considered

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SENT TO: Assistant Commission for Patent, Washington, DC 20231.

45060756v1

Examiner's

Signature

¹ Unique citation designation number ² See attached Kinda of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant to place a check mark here if English language Translation is attached.